

REMARKS/ARGUMENTS

Claims 1 to 6, 8, 11, 13, 15 to 17 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al. (US 5,186,472) in view of Hintenlang (US 6,062,571) and in further view of Guth et al. (US 6,336,638). Claims 7, 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al., and further in view of Peisker et al. (US 4,501,431). Claims 1 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero (US 4,936,591) in view of Hintenlang and further in view of Guth et al. Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al. and further in view of Besson et al. (US 6,401,843). Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al. and further in view of Forschirm (US 5,886,066). Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al. and further in view of Johnston et al. (US 6,428,013).

Claims 1, 15, 16 and 18 has been amended.

Reconsideration of the application is respectfully requested.

35 U.S.C. §103(a) Rejections

Claims 1 to 6, 8, 11, 13, 15 to 17 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al. (US 5,186,472) in view of Hintenlang (US 6,062,571) and in further view of Guth et al. (US 6,336,638). Claims 7, 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al., and further in view of Peisker et al. (US 4,501,431). Claims 1 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Romero (US 4,936,591) in view of Hintenlang and further in view of Guth et al. Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al. and further in view of Besson et al. (US 6,401,843). Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth and further in view of Forschirm (US 5,886,066). Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Romero et al., Hintenlang and Guth et al. and further in view of Johnston et al. (US 6,428,013).

The Romero references disclose a unitized radial lip seal in with a special flange 28 on a metal inner casing 12. The metal casing 12 fits over the shaft. See col. 3, line 43 to 51. The

elastomeric seal body 40 thus does not directly contact the shaft, and in fact cannot in Romero, as the entire purpose of Romero is to have the flange 28 of the inner casing interact with the elastomeric seal, and to provide a unitized radial lip seal.

Claims 1, 15 and 16 have been amended to clarify that in the present invention the dynamic sealing element directly contacts the shaft. It would not have been obvious to provide this limitation to Romero, as Romero requires the metal casing 12 between the shaft and body 40. Metal casing 12 clearly is not a shaft and is specifically defined as part of the seal in Romero.

In addition, there would have been no motivation to alter the characteristics of the seal body 40 to provide a higher thermal stability material in view of Hintenlang and Guth, as the characteristics of the contact surface, i.e. metal casing 12, for the body 40 are known, whereas in Hintenlang and Guth the contact characteristics are unknown.

Withdrawal of the rejections is respectfully requested.

In addition, with respect to claim 6, the body 40 does not create a lip shape when slid onto the shaft. New claim 21 has been added to recite a similar but slightly different limitation as well with respect to claim 16.

With respect to claim 7, it is respectfully submitted that the Romero device teaches away from the claimed limitation of “wherein the dynamic sealing element has a lip enclosing the shaft, the lip having a lip surface facing the shaft, and wherein the lip is provided with openings on the lip surface for return delivery of a medium to be sealed off” since it is a unitized seal with flange 28 and would have no reason or capability to provide a lip with opening for return delivery as claimed. It is respectfully submitted that one would not have combined the teachings of Peisker with the unitized seal of Romero. A new independent claim with the limitations of previous claim 7 has been submitted, as again there would have been no reason or desire to provide return delivery as claimed with the unitized seal of Romero.

With respect to claims 9 and 10, claim 9 recites “wherein the dynamic sealing element has a surface facing away from the shaft, the surface having concentric or screw-shaped openings.” It is respectfully submitted that one of skill in the art would not have provided such openings in the unitized seal of Romero in view of Peisker.

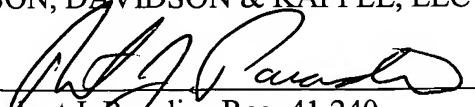
Withdrawal of the rejection to claims 1 to 20 is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,
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